

**ABSTRACT**

A packet mode (e.g. IP) group communication service layer is provided on top of a standard mainstream cellular radio network. Conceptually, the group communication layer comprises a pair of basic logical entities, an application bridge and a call processing server (CPS). The bridge and the CPS run group service applications which communicate with group service application(s) in a mobile station MS over the IP connections provided by the radio network. The CPS is responsible for control plane management of group communications. The bridge is responsible for the real-time distribution of VoIP packets to the user terminals according to their group memberships over valid connections programmed by the CPS.